

Remarks

Claims 1-5 are now present in the application. Claims 1-5 have been amended. Claims 1 and 4 are independent. Reconsideration of this application, as amended, is respectfully requested.

Status of the Drawings

In the Examiner's Office Action dated October 11, 2001, no indication as to the status of the drawings has been provided. As the Examiner will note, the present application was filed with two (2) sheets of formal drawings, as indicated on the transmittal dated July 25, 2000. Accordingly, the Draftsperson should have reviewed the drawings for formal matters.

In view of the above, it is respectfully requested that the Examiner provide an indication as to the status of the drawings in the next Office Communication or forward a Notice of Draftspersons Patent Drawing Review PTO-948 so that Applicant can make any necessary drawing corrections in a timely manner.

Rejection Under 35 U.S.C. § 112

Claim 1 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. This rejection is respectfully traversed.

Independent claim 1 has been carefully reviewed and revised, taking into consideration the specific deficiencies pointed out by the Examiner. With regard to the last objection by the Examiner, the Examiner asserts that the phrase "JIS-C" also renders the claim indefinite. Specifically, the Examiner asserts that the phrase "JIS-C" is indefinite since it is an abbreviation and because it describes a measuring technique which may change with time. Applicant respectfully submits that the Examiner's position is incorrect. Although the phrase "JIS-C" is an abbreviation for Japanese Industrial Standard type C, Applicant does not believe that this renders the claim indefinite. The phrase "JIS-C" is a standard hardness measurement. Since JIS-C is a standard, it would not change with time any more than Shore hardness would change. Therefore, there is nothing indefinite with regard to the use of the phrase "JIS-C" to set forth the hardness in independent claim 1.

Attached hereto for the Examiner's consideration is a Japanese document which discusses the JIS-C standard in relation to other standards. A translation of portions of this document have been provided for the Examiner's consideration.

In view of the above, Applicant respectfully submits that the use of the phrase "JIS-C" is proper in the present case. One having ordinary skill in the art would readily understand what the phrase refers to.

In view of the above amendments and remarks, Applicant respectfully submits that independent claim 1 is definite and clear. Accordingly,

reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, second paragraph are respectfully requested.

Rejection Under 35 U.S.C. § 103

Claims 1-5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Kataoka et al., USPN 5,533,282 in view of Wideman et al., USPN 5,922,792. This rejection is respectfully traversed.

The Examiner asserts that Kataoka et al. discloses all the elements of the claim except for the specific synthetic resin which is used for the spike. Referring to page 3, paragraph 4 of the Examiner's Office Action, the Examiner asserts that the spike and the plate to which it is attached comprise synthetic resin. The Examiner points to column 1, lines 12-22 of Kataoka et al. However, referring to this portion of Kataoka et al., it is stated "spike attaching portions 30 are projected and formed by the same material as this surface 20a as a reference face." Applicant respectfully submits that this recitation is insufficient to indicate that the spike is made of synthetic resin.

First, Fig. 1 of Kataoka et al. describes the prior art and not the Kataoka et al. invention. Second, this recitation discusses the spike attaching portion 30 and not the spike 9 itself. Referring to Fig. 3 of Katoaka et al., the spike attaching portion 30 would be equivalent to the spike attaching portion 4. Accordingly, column 1, lines 12-22 merely indicates that the spike attaching portion 4 is made of the same material as the hard plate 2. There is no indication in the Katoaka et

al. reference which indicates that the spike 9 is made of a synthetic resin material.

In view of the above, Applicant respectfully submits that the Examiner's modification of the Kataoka et al. reference is improper. The Examiner relies on Wideman et al. to teach the specific synthetic resin. The synthetic resin in Wideman et al. is not a hard material as is the hard plate 2 of Kataoka et al. Since there is no indication in Kataoka et al. that the spikes 9 are made of a synthetic resin material, and in particular a soft synthetic material, Applicant respectfully submits that one having ordinary skill in the art would not be motivated to modify the Kataoka et al. spike in view of the Wideman et al. teaching as asserted by the Examiner.

Specifically, since the shoe of Kataoka et al. is used for track and field events, Applicant respectfully submits that it is very likely that the spikes 9 are made of a very hard material such as a metal, ceramic or a hard synthetic resin material. Since the synthetic resin material of Wideman et al. is a soft material, one having ordinary skill in the art would not be motivated to use the material of Wideman et al. to construct the spike 9 of Kataoka et al. Referring to column 8, lines 21-31 of Wideman et al., for example, the material of Wideman et al. is used to form tires, belts, hoses, etc. Referring to claim 9 of Wideman et al., it is also indicated that rubber shoe heels and soles can be constructed of this material. Although this is more related to the Kataoka et al. invention, it clearly indicates that the material is used only for "rubber" shoe heels and soles and

therefore the material is clearly a soft material which would be much softer than the spikes 9 of Kataoka et al.

In view of the above, Applicant respectfully submit that the modification proposed by the Examiner is unreasonable. The Examiner has provided absolutely no suggestion to provide soft spikes in the Kataoka et al. shoe. Accordingly, the Examiner's rejection should be withdrawn.

With regard to the Wideman et al. reference itself, to the extent that the Examiner's modification of the Kataoka et al. reference is proper, a fact which Applicant does not agree with, Applicant respectfully submits that the material of Wideman et al. fails to teach a JIS-C hardness in the range of from 35 to 95 as recited by the independent claims of the present invention. Referring to page 4, second full paragraph of the Examiner's Office Action, the Examiner recognizes that Wideman et al. fails to teach a JIS-C hardness of between 35 and 95. The Examiner recognizes that Wideman teaches a hardness of 50.5 Shore hardness. Applicant respectfully submits that the Shore hardness of 50.5 is outside the range of hardness recited in the independent claims of the present invention. A JIS-C hardness of from 35-95 is converted to Shore hardness of from 70-100. Namely, a hardness of 50.5 (Shore hardness; column 10, lines 25-48 in Wideman et al.) is not within the range of 35-90 JIS-C hardness. It would be necessary for Wideman to teach a Shore hardness of from 70-100 in order to be within the claimed range.

In view of the above, neither the Kataoka et al. or Wideman et al. references teach the hardness recited in the independent claims of the present invention. Accordingly, the Examiner's rejection under 35 U.S.C. § 103 is improper and should be withdrawn.

Referring again to page 4, second full paragraph of the Examiner's Office Action, the Examiner asserts that it would be obvious to vary the hardness of the rubber, which would be readily determined through routine experimentation by one having ordinary skill in the art depending on the desired end result. Applicant respectfully submits that the Examiner has not established a *prima facie* case of obviousness in the present case. In order to establish a *prima facie* case of obviousness, the Examiner must set forth some rationale or suggestion of why it would be obvious to modify a reference in a particular manner. In the present case, the Examiner has provided absolutely no reason to modify the Kataoka et al. reference in the manner asserted by the Examiner. Accordingly, the Examiner's rejection is improper and should be withdrawn.

As mentioned above, Applicant respectfully submits that one having ordinary skill in the art would not be motivated to modify the Kataoka et al. reference in view of the Wideman et al. reference, since the Wideman et al. reference teaches a very soft material while Kataoka et al. teaches a very hard material. Since there is no teaching provided by the Examiner to provide the Kataoka et al. reference with a soft spike, one having ordinary skill in the art would not modify the Kataoka et al. shoe as proposed.

Finally, independent claims 1 and 4 have been amended to recite "a difference (C1-C2) between a hardness C1 of the ground contact portion of the spike and a hardness C2 of the projected portion is in the range from 5-80." Applicant respectfully submits that the references relied on by the Examiner fail to teach or suggest this aspect of the present invention.

Referring to page 13, last paragraph through page 14, first paragraph, setting the difference in hardness in the range from 5 to 80 is advantageous in order to prevent a golfer's foot from slipping on grass and hard ground and to prevent the spike from wearing and chipping. Since the references relied on by the Examiner fail to teach this aspect of the present invention, it is respectfully submitted that the Examiner's rejection is improper and should be withdrawn.

With regard to dependent claims 2, 3 and 5, Applicant respectfully submits that these claims are allowable due to their dependence upon allowable independent claims 1 and 4, as well as for the additional limitations recited by these claims.

In view of the above amendments and remarks, Applicant respectfully submits that claims 1-5 clearly define the present invention over the references relied on by the Examiner. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 103 are respectfully requested.

Conclusion

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently pending rejections and that they be withdrawn.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

In the event there are any matters remaining in this application, the Examiner is invited to contact Paul C. Lewis, Registration No. 43,368 at (703) 205-8000 in the Washington, D.C. area.


Attached hereto is a marked-up version of the changes made to the application by this Amendment.

Applicant respectfully petitions under the provisions of 37 C.F.R. § 1.136(a) and § 1.17 for a one-month extension of time in which to respond to the Examiner's Office Action. The Extension of Time Fee in the amount of \$110.00 is attached hereto.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

BIRCH, STEWART, KOLASCH & BIRCH, LLP

By 
for Andrew D. Meikle
Reg. No. 32,868 #43,368

ADM/PCL/cl

P. O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000

Attachment: Version with Markings to Show Changes Made

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

The paragraph beginning on page 1, line 4, has been amended as follows:

The present invention relates to shoes[, and more]. In [particularly] particular, the present invention relates to shoes [whose] having an outsole [has] with a spike.

The paragraph beginning on page 1, line 7, has been amended as follows:

When a golfer takes a shot [on] from a tee [ground] box or [a] fairway, the golfer swings on [a lawn] grass. When the golfer takes a shot [on a bunker] from a bunker, the golfer swings on sand. If the golfer's foot slips on the ground during swinging, the golfer will make an erroneous shot. While the golfer goes round, the golfer walks on the fairway and the rough [rising and falling], which rises and falls. When the golfer's foot slips [thereon] during walking, the golfer has an increased burden on the feet. To prevent from [slip] slipping during swinging and walking, the golfer wears golf shoes (so-called [spike shoes] spikes) having a plurality of spikes formed on the bottom surface thereof. Each spike has a single pin formed at the center of the lower surface of the disk-shaped flange thereof and is made of a metal or ceramic material [or ceramics]. The spike cuts into the [lawn] grass, thus preventing the golfer's foot from slipping thereon.

The paragraph beginning on page 1, line 22, has been amended as follows:

Frequently, the golfer is required to walk not only on the [lawn] grass and the sand, but also on a hard ground paved with asphalt or concrete, for example, a path located between the putting green and the tee [ground] box of a subsequent hole, a club house, and the like. The spike does not cut into the hard ground, thus being incapable of sufficiently preventing the golfer's foot from slipping thereon. Further, the [spike shoes] spikes give the golfer a feeling that [a] pressure is applied upward to the golfer's feet. Thus, the [spike shoes] spikes are not comfortable to wear. Furthermore, the spike may injure the lawn (lawn on putting green in particular).

The paragraph beginning on page 2, line 9, has been amended as follows:

To solve the above-described disadvantages, [the] a soft-type spike has been proposed and is coming into popular use. The soft-type spike is formed of a molded elastic material such as synthetic resin. The area of the part of the soft-type spike that contacts the ground is increased by forming many projections thereon and shaping it trapezoidally in its vertical sectional configuration. An example of [the] a soft-type spike is disclosed in Japanese Registered Utility Model Publication No. 3027022. However, the soft-type spike is incapable of sufficiently preventing the golfer's foot from slipping on [the] hard ground. [There]

Furthermore, there is still room for improvement of the soft-type spike to prevent [slip] slipping on [a] wet ground in particular.

The paragraph beginning on page 2, line 23, has been amended as follows:

[The] A golf [shoes] shoe not having [the] a spike but having [the] an elastic projection formed on the bottom surface thereof is disclosed in Japanese Patent Publication 6-22482. The elastic projection prevents the golfer's foot from slipping on [the] hard ground but hardly cuts into the lawn. Therefore, the golf shoes are incapable of sufficiently preventing the golfer's foot from slipping during swinging.

The paragraph beginning on page 3, line 6, has been amended as follows:

[The] A golf [shoes] shoe having [the] a spike and [the] a projection [having] on the surface which contacts the ground is disclosed in Japanese Patent Application Laid-Open No. 11-89605. In the above golf shoes, the spike mainly prevents [the slip] slipping on [the lawn], and the projection mainly prevents [the] slipping on [the] hard ground.

The paragraph beginning on page 3, line 12, has been amended as follows:

However, the golf shoes disclosed in Japanese Patent Application Laid-Open No. 11-89605 are not satisfactory in preventing [the slip] slipping on both [the lawn] grass and [the] hard ground. The above golf shoes have another problem in that the spike is liable to chip and wear.

The paragraph beginning on page 5, line 11, has been amended as follows:

Accordingly, the shoes prevent [a slip] slipping on both [a lawn] grass and [a] hard ground. The cutting-time elongation of the rubber-molded material is set to 280% or more. Therefore, chipping of the spike can be suppressed. The rubber-molded material contains 30 wt% or more of polybutadiene or acrylonitrile-butadiene copolymer as a rubber component thereof. Thus, wear of the spike can be suppressed. The difference (h_1-h_2) between the projected height h_1 of the spike and the projected height h_2 of the projected portion is set to the range from 1mm to 15mm both inclusive. Therefore, it is comfortable for a golfer to wear the shoes and possible to [restrain] prevent the [lawn] grass from being injured.

A paragraph has been added immediately after line 5, on page 6:

Further scope of applicability of the present invention will become apparent from the detailed description given hereinafter. However, it should be understood that the detailed description and specific examples, while indicating preferred embodiments of the invention, are given by way of illustration only, since various changes and modifications within the spirit and scope of the invention will become apparent to those skilled in the art from this detailed description.

A paragraph has been added immediately after line 6, on page 6:

The present invention will become more fully understood from the detailed description given hereinbelow and the accompanying drawings which are given

by way of illustration only, and thus are not limitative of the present invention, and wherein:

The paragraph beginning on page 6, line 7, has been amended as follows:

Fig. 1 is a bottom view showing golf shoes according to an embodiment of the present invention[.]; and

The paragraph beginning on page 6, line 23, has been amended as follows:

Fig. 2 is a partly enlarged sectional view showing the outsole 1 shown in Fig. 1. As apparent from Figs. 1 and 2, the spike 3 has a screw 6, a disk-like portion 7, and [a pin] pins 8. The screw 6 is made of metal. Unshown one end (lower end in Fig. 2) of the screw 6 is embedded in the disk-like portion 7. The spike 3 is fixed to the body 2 by tightening the screw 6 into a screw hole 9 formed in the body 2. Eight pins 8 are formed proximately to the peripheral edge of the disk-like portion 7, with the pins 8 spaced at regular intervals. The disk-like portion 7 and the [pin] pins 8 are formed integrally. The lower surface of the disk-like portion 7 and the [pin] pins 8 form the portion of the spike 3 that contacts the ground.

The paragraph beginning on page 8, line 5, has been amended as follows:

When a golfer is on [a lawn] grass, the [pin] pins 8 [cuts] cut thereinto, thus preventing a golfer's foot from slipping thereon. When a golfer is on [a] hard

ground, the lower end of the [pin] pins 8, the ground-contact portion 10 of the first projected portion 4, and the ground-contact portion 11 of the second projected portion 5 contact the ground, thus preventing the golfer's foot from slipping thereon. Because the ground-contact portions 10 and 11 have a large area, respectively, as described above, the load is applied to the ground-contact portions 10 and 11 mainly. Accordingly, on [the] hard ground, the golfer is greatly relieved of [a] pressure that is applied upward to the golfer's feet.

The paragraph beginning on page 8, line 18, has been amended as follows:

The disk-like portion 7 and the [pin] pins 8 are composed of a rubber-molded material. As the rubber-molded material, polybutadiene (BR) or an acrylonitrile-butadiene copolymer (NBR) is used. The polybutadiene and the acrylonitrile-butadiene copolymer improve the wear resistance of the spike 3. Other rubber may be used in combination with the polybutadiene or the acrylonitrile-butadiene copolymer to improve the processability of the rubber-molded material and reduce the cost of the material thereof. Rubber to be used in combination with the polybutadiene or the acrylonitrile-butadiene copolymer includes natural rubber include polyisoprene, styrene-butadiene copolymer, chloroprene rubber, ethylene-propylene-diene copolymer, butyl rubber, acrylic rubber, epichlorohydrin rubber, polysulfide rubber, and polyurethane.

The paragraph beginning on page 10, line 7, has been amended as follows:

The hardness (JIS-C) of the rubber-molded material composing the disk-like portion 7 and the pin 8 is set to the range from 35 to 95 both inclusive. When the hardness of the rubber-molded material is set to 35 or more, the pin 8 is prevented from becoming too soft and thus cuts into the [lawn] grass easily. Accordingly, the golfer's foot can be prevented from slipping on the [lawn] grass. When the hardness of the rubber-molded material is set to 95 or less, the pin 8 is prevented from becoming too hard and thus flexes on [the] hard ground. Consequently, the pin 8 contacts the hard ground in a large area and has a high gripping force. Accordingly, the golfer's foot can be prevented from slipping on [the] hard ground. The flexure of the [pin] pins 8 relieves the golfer of the pressure that is applied upward to the golfer's feet from the hard ground. That is, the shoes feel comfortable to wear. From this point of view, the hardness of the rubber-molded material is set favorably to the range from 40 to 90 both inclusive and more favorably to the range from 45 to 65 both inclusive.

The paragraph beginning on page 11, line 14, has been amended as follows:

In addition to the above-described rubbers, an appropriate amount of the following additives may be added to the rubber-molded material composing the disk-like portion 7 and the [pin] pins 8 as necessary: a filler such as carbon black, silica, calcium carbonate, and clay; and additives such as a cross-linking agent, a vulcanizing accelerator, zinc white, stearic acid, an aging resistor, a softening agent, a plasticizer, a sililation reagent, a silane coupling agent.

The paragraph beginning on page 11, line 23, has been amended as follows:

The difference (h_1-h_2) between the projected height h_1 (see Fig. 2) of the spike 3 and the projected height h_2 of the first projected portion 4 as well as the second projected portion 5 is set to the range from 0mm to 15mm both inclusive. By setting the height difference (h_1-h_2) to 0mm or more, the [pin] pins 8 can cut into the [lawn] grass easily. Therefore, the golfer's foot can be prevented from slipping on the [lawn] grass. By setting the height difference (h_1-h_2) to 15mm or less, it is possible to [restrain] prevent the spike 3 from injuring the [lawn] grass and allow the golfer to walk stably on [the] hard ground. From this point of view, the height difference (h_1-h_2) is set favorably to the range from 2mm to 8mm both inclusive and more favorably to the range from 4mm to 6mm both inclusive.

The paragraph beginning on page 12, line 12, has been amended as follows:

As described previously, the disk-like portion 7 and the [pin] pins 8 of the spike 3 are composed of [the] a rubber-molded material, and the screw 6 of the spike 3 is made of metal. However, the material of the spike 3 is not limited to these materials. For example, the screw 6 may be formed of a hard synthetic resin, and the upper part of the disk-like portion 7 may be formed of metal. In any of these modified cases, the part of the spike 3 that contacts the ground is required to be composed of the rubber-molded material.

The paragraph beginning on page 13, line 10, has been amended as follows:

The material of the body 2 is not limited to a specific one but composed of a crosslinked rubber equivalent to that of the outsole of conventional shoes. The hardness (JIS-C) of the body 2 is set favorably to the range from 20 to 80 both inclusive, more favorably to the range from 25 to 60 both inclusive, and most favorably to the range from 25 to 45 both inclusive. If the hardness is less than the lower limit of the above range, the stability of the shoes on [the] hard ground may deteriorate. On the other hand, [If] if the hardness is more than the upper limit of the above range, the golf shoes [has] have a deteriorated follow-up performance for [an] irregular ground. Thus, there is a fear that the golf shoes prevent the golfer from feeling comfortable [to wear].

The paragraph beginning on page 13, line 24, has been amended as follows:

The difference (C1-C2) between the hardness (JIS-C) C1 of the spike 3 at its portion that contacts the ground and the hardness (JIS-C) C2 of the body 2, the first projected portion 4, and the second projected portion 5 is set favorably to the range from 5 to 80 both inclusive, more favorably to the range from 10 to 65 both inclusive, and most favorably to the range from 15 to 50 both inclusive. If the difference (C1-C2) is less than the lower limit of the above range, it may be difficult to prevent the golfer's foot from slipping on both [the lawn] grass and [the] hard ground. On the other hand, if the difference (C1-C2) is more than the upper

limit of the above range, the degree of [the] concentration of [a] stress on the spike 3 is so high that the spike 3 is liable to wear and chip.

IN THE CLAIMS

The claims have been amended as follows:

1.(AMENDED) [Shoes having] A shoe, comprising:

an outsole including [a spike and] a projected portion having a ground-contact surface formed thereon[.]; and

[wherein] a spike having a ground-contact portion [of the spike is] made of a molded rubber [rubber-molded] material [whose] having a JIS-C hardness [is set to] in the range from 35 to 95 [both inclusive and whose cutting-time] and an elongation at break of [is set to] 280% or more; said molded rubber [rubber-molded] material contains 30 wt% or more of polybutadiene as a rubber component thereof; [and] the difference (h1-h2) between a projected height h1 of said spike and a projected height h2 of said projected portion is [set to] in the range from 0mm to 15mm [both inclusive]; and a difference (C1-C2) between a hardness C1 of the ground contact portion of the spike and a hardness C2 of the projected portion is in the range from 5-80.

2. (AMENDED) [Shoes] The shoe according to claim 1, wherein said polybutadiene contains a cis-1,4 linkage at 70% or more [of a micro-structure] in the polymer structure thereof.

3. (AMENDED) [Shoes] The shoe according to claim 1, wherein said spike is removably mounted on said outsole.

4. (AMENDED) [Shoes having] A shoe, comprising:

an outsole including [a spike and] a projected portion having a ground-contact surface formed thereon[.]; and

[wherein] a spike having a ground-contact portion [of said spike is] made of a molded rubber [rubber-molded] material [whose] having a JIS-C hardness [is set to] in the range from 35 to 95 [both inclusive and whose cutting-time] and an elongation at break of [is set to] 280% or more; said molded rubber [rubber-molded] material contains 30 wt% or more of acrylonitrile-butadiene copolymer as a rubber component thereof; [and] the difference (h1-h2) between a projected height h1 of said spike and a projected height h2 of said projected portion is [set to] in the range from 0mm to 15mm [both inclusive]; and a difference (C1-C2) between a hardness C1 of the ground contact portion of the spike and a hardness C2 of the projected portion is in the range from 5-80.

5. (AMENDED) [Shoes] The shoe according to claim 4, wherein said spike is removably mounted on said outsole.